Examiner's Amendment

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee. Authorization for this examiner's amendment was given in a telephone interview with Ms, Monica Grewal on Oct 23 2008.

The application has been amended as follows:

Please **amend Claim 1** as follows.

An optical system for real time processing of an input medical image of bodily tissue, and dynamically identifying abnormal pathological changes in the input medical image, the system comprising:

a light source emitting light directed at the input medical image of bodily tissue;

a first optical Fourier element that Fourier transforms light from the input medical image, wherein the Fourier transform occurs in a Fourier plane;

an adjustable spatial filter in the Fourier plane that filters the transformed light by selectively removing a first frequency component and transmitting a second frequency component, the adjustable spatial filter comprising a transparent annular ring surrounded by opaque regions, wherein the transparent annular ring is expanded or contracted to transmit the second frequency component which is dynamically selected to associate with the abnormal pathological changes in the input medical image;

a second optical Fourier element that receives the filtered transformed light and inversely Fourier transforms the filtered transformed light to provide a processed medical image of the bodily tissue including the second frequency component; and

an image sensor that detects the processed medical image and generates an electronic representation of the processed medical image.

Please **amend Claim 15** as follows.

A method of real time processing of an input medical image of bodily tissue, and dynamically identifying abnormal pathological changes in the input medical image, using an optical Fourier system, the method comprising:

irradiating the input medical image of bodily tissue with light from an input beam;

optically Fourier transforming light from the input medical image to generate a Fourier spectrum;

applying at least one adjustable spatial filter to the Fourier spectrum to generate a filtered Fourier spectrum, the at least one adjustable spatial filter comprising a transparent annular ring surrounded by opaque regions;

dynamically adjusting said adjustable spatial filter by expanding or contracting the transparent annular ring such that the adjustable spatial filter removes a first frequency component and transmits a second frequency component associated with the abnormal pathological changes in the input medical image;

inversely Fourier transforming the filtered Fourier spectrum to generate a processed medical image including the transmitted second frequency component; and

detecting the processed medical image.

Please **amend Claim 26** as follows.

An optical system for real time processing of an input mammographic image, and dynamically identifying abnormal pathological changes in the input mammographic image, the system comprising:

a light source emitting light directed at the input mammographic image;

a first optical Fourier element that Fourier transforms light from the input mammographic image, wherein the Fourier transform occurs in a Fourier plane;

an adjustable spatial filter in the Fourier plane that filters the transformed light to selectively remove a low frequency component and transmit a higher frequency component, the adjustable spatial filter comprising a transparent annular ring surrounded by opaque regions, wherein the transparent annular ring is expanded or contracted to transmit the higher frequency component which is dynamically selected to associate with the abnormal pathological changes present in the input mammographic image;

a second optical Fourier element that receives the filtered transformed light and inversely Fourier transforms the filtered transformed light to provide a processed mammographic image; and

an image sensor that detects the processed image and generates an electronic representation of the processed image.

Cancel claims 31,34 and 37.

Reasons for allowance

In view of the remarks/amendments dated 08/18/2008 and the closest prior arts on records as stated in the PTO 892 independent claims 1,15 and 26 are allowed. Claims 2-30, 32-33 and 35-36 depend directly or indirectly on the independent claims therefore they are allowable.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAYESH A. PATEL whose telephone number is (571)270-1227. The examiner can normally be reached on M-F 7.00am to 4.30 pm (5-4-9). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on 571-272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

11/03/08
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